

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
14 December 2000 (14.12.2000)

PCT

(10) International Publication Number
WO 00/075173 A3

(51) International Patent Classification⁷: C07K 14/47.
A23L 1/305, A61K 38/17, C07K 16/18

(21) International Application Number: PCT/GB00/02128

(22) International Filing Date: 2 June 2000 (02.06.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
9912852.2 2 June 1999 (02.06.1999) GB

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(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

(88) Date of publication of the international search report:
11 July 2002

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **PEPTIDE FRAGMENTS OF COLOSTRININ**

(57) Abstract: The amino acid sequence of several peptides present in Colostrinin is disclosed. These peptides are useful, inter alia, in the treatment of disorders of the immune system and the central nervous system.

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 00/02128

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C07K14/47 A23L1/305 A61K38/17 C07K16/18

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07K A23L A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, CHEM ABS Data, BIOSIS, MEDLINE, WPI Data, PAJ, STRAND

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 98 14473 A (GEORGIADIS BIOTECH LTD ; JANUSZ MARIN (PL); LISOWSKI JOZEF (PL); DU) 9 April 1998 (1998-04-09) cited in the application the whole document	1, 2, 4-6, 9-32
X	JUNG E.A.: "Peptides 1988, Proceedings 20th EPS, 1988, Tübingen" 1989, WALTER DE GRUYTER, BERLIN XP002148606 page 742 -page 744	1, 4-6, 9-32

☒ Further documents are listed in the continuation of box C

☒ Patent family members are listed in annex

* Special categories of cited documents *

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- *Z* document member of the same patent family

Date of the actual completion of the international search

18 December 2000

Date of mailing of the international search report

03.01.2001

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 00/02128

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>SLOOTSTRA J W ET AL: "STRUCTURAL ASPECTS OF ANTIBODY-ANTIGEN INTERACTION REVEALED THROUGH SMALL RANDOM PEPTIDE LIBRARIES" MOLECULAR DIVERSITY, NL, ESCOM SCIENCE PUBLISHERS, LEIDEN, vol. 1, 1996, pages 87-96, XP002051008 ISSN: 1381-1991 the whole document</p>	1,3-5,7, 22,23
X	<p>BREZDEN E.A.: "FMRFamide-activated Ca²⁺ channels in Lymnaea heart cells are modulated by SEEPLY, a neuropeptide encoded on the same gene" J.NEUROPHYSIOL, vol. 81, no. 4, April 1999 (1999-04), pages 1818-1826, XP002155471 page 1818, column 2</p>	1,4,5, 9-27,31, 32
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X	<p>KIM E.A.: "A novel member of the RING finger family, KRIP-1" PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF USA, vol. 93, December 1996 (1996-12), pages 15299-15304, XP002155473 WASHINGTON US See Fig.2, (aa.500-505)</p>	2,4,6
X	<p>DATABASE WPI Section Ch, Week 199423 Derwent Publications Ltd., London, GB; Class B04, AN 1994-188987 XP002155476 & JP 06 128287 A (NISSHIN FLOUR MILLING CO), 10 May 1994 (1994-05-10) abstract</p>	1,3-5,7, 9-19, 21-27
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INTL NATIONAL SEARCH REPORT

International Application No

PCT/GB 00/02128

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>WO 97 24371 A (MIDIA LIMITED ;POZZILLI PAOLO (IT)) 10 July 1997 (1997-07-10)</p> <p>The whole document; see especially SEQ ID NO 6</p> <p style="text-align: center;">---</p>	1,3-5,7, 9-18, 22-30
X	<p>DATABASE WPI Section Ch, Week 199651 Derwent Publications Ltd., London, GB; Class B04, AN 1996-515013 XP002155478 & JP 08 269090 A (SNOW BRAND MILK PROD CO LTD), 15 October 1996 (1996-10-15) abstract</p> <p style="text-align: center;">---</p>	1,3-5,7, 9-19, 21-27
X	<p>EP 0 583 074 A (CALPIS FOOD IND CO LTD) 16 February 1994 (1994-02-16)</p> <p>the whole document</p> <p style="text-align: center;">---</p>	1,3-5, 7-18, 22-27
X	<p>OTANI H ET AL: "THE COMMON ANTIGENIC SITE OF BOVINE AND HUMAN BETA-CASEINS" MILCHWISSENSCHAFT, VV GMBH VOLKSWIRTSCHAFTLICHER VERLAG. MUNCHEN, DE, vol. 43, no. 11, 1988, pages 705-707, XP000952715 ISSN: 0026-3788 the whole document</p> <p style="text-align: center;">---</p>	1,3-5, 7-18, 22-27
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A	<p>GIDROL E.A.: "Annexin-like protein from Arabidopsis thaliana rescues delta-oxyR mutant of E coli from H2O2 stress" PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF USA, vol. 93, October 1996 (1996-10), pages 11268-11273, XP002155474 WASHINGTON US figure 3</p> <p style="text-align: center;">---</p>	1,3-5,7, 8

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 00/02128

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
A	<p>PROVOT C ET AL: "Complete sequence of the ovine beta-casein-encoding gene and interspecies comparison" GENE, NL, ELSEVIER BIOMEDICAL PRESS. AMSTERDAM, vol. 154, no. 2, 1995, pages 259-263, XP004042484 ISSN: 0378-1119 figure 1</p>	
A	<p>CARLES E.A.: "A new strategy for primary structure determination of proteins: application to bovine beta-casein" FEBS LETTERS, vol. 229, no. 2, March 1988 (1988-03), pages 265-272, XP002155475 AMSTERDAM NL the whole document</p>	
A	<p>GREENBERG R ET AL: "HUMAN BETA-CASEIN. AMINO ACID SEQUENCE AND IDENTIFICATION OF PHOSPHORYLATION SITES" JOURNAL OF BIOLOGICAL CHEMISTRY. (MICROFILMS), US, AMERICAN SOCIETY OF BIOLOGICAL CHEMISTS, BALTIMORE, MD, vol. 256, no. 8, 25 April 1984 (1984-04-25), pages 5132-5136, XP002030852 the whole document</p>	

INTERNATIONAL SEARCH REPORT

International application No.
PCT/GB 00/02128

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

Although claim 21 is directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/SA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-32(all partially), 33-35(complete)

Peptides having the structure defined by SEQ ID No 1, 7 or 16, peptides containing them, their compositions and use and antibodies to said peptides

2. Claims: 1-32(partially)

Peptide having the structure defined by one of the SEQ ID No 2-6 and 8, peptides containing it, their compositions and use and antibodies to said peptides

3. Claims: 1,3-5,7-32(partially)

Peptide having the structure defined by one of the SEQ ID No 9-15,17 and 18, peptides containing it, their compositions and use and antibodies to said peptides

4. Claims: 1,3-5,7-32(partially)

Peptide having the structure defined by one of the SEQ ID No 19-32, peptides containing it, their compositions and use and antibodies to said peptides

5. Claims: 1,3-5,7-32(partially)

Peptide having the structure defined by the SEQ ID No 33, peptides containing it, their compositions and use and antibodies to said peptides

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB 00/02128

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